CHAPTER IV

MANAGEMENT STRATEGIES

Introduction

This chapter develops and presents general and specific procedures through which effective cultural resource management programs are implemented. The section on proactive management strategies discusses a range of general procedures and strategies that typically are applied to the solution of cultural resource management problems. A general assessment of the applicability of each strategy to Fort Belvoir's cultural resources is presented at the end of each section. The standard operating procedures that follow present specific step-by-step procedures that can be used by Fort Belvoir personnel in complying with Federal legislation and Department of the Army regulations and in meeting the goals of the installation's cultural resources management program.

Installation-specific recommendations for achieving the overall objectives of Fort Belvoir's CRM program are presented in Chapter V, *Action Plan* .

Effective CRM programs are integrated solidly into the administrative infrastructure of an installation and are proactive; that is, an effective CRM program anticipates management needs in advance of projects or undertakings, and implements strategies that will fulfill the installation's CRM obligations within the context of its military mission. Army regulations recognize this by vesting the general responsibility for cultural resource management with the Garrison Commander, and requiring that he in turn assign the responsibility for implementing CRM programs to a designated Cultural Resources Manager (CRM) for the installation.[1] These regulations also specify that installation CRM programs should be integrated with training and natural resources management planning activities, and with other installation-wide planning documents.[2]

Fort Belvoir's CRM program currently meets these two basic regulatory requirements. Cultural resource management activities are implemented in the Environmental and Natural Resources Division of the Directorate of Installation Services (ENRD-DIS), where a designated Cultural Resources Manager (CRM) is responsible for both environmental (i.e., NEPA) and cultural resources compliance. The installation also has developed a Real Property Master Plan (RPMP), an Installation Design Guide[3] and an Integrated Natural Resources Management Plan,[4] into which elements of this ICRMP should be incorporated, as these documents are updated.

Proactive Management Strategies

A proactive CRM program seek to anticipate and resolve cultural resource management problems before they have reached crisis proportions. The following sections define and discuss general strategies that can facilitate the achievement of such a proactive program.

Continued Identification and Evaluation

Definition/discussion. Cultural resource identification involves locating and compiling information about cultural resources within the installation to develop a comprehensive cultural resources inventory. Early identification of historic properties that may require more focused attention or further investigation enables planners to determine the potential impacts of their planned undertakings on cultural resources. Often carried out in compliance with Sections 106 and/or 110 of the NHPA, identification studies include literature review, archival research, and field surveys. Surveys should be conducted according to methods specified in, and by personnel who meet the professional qualifications outlined in, *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines, National Register Bulletin 24* (48 CFR 4)[5] and in *Guidelines for Archaeological Investigations In Virginia*.[6]

Cultural resource evaluation involves assessing the significance of identified cultural resources to determine their eligibility for listing in the National Register of Historic Places. The National Register Criteria for Evaluation (36 CFR 60.4[a-d]) are used to evaluate the significance of architectural and archeological resources. Briefly, these criteria stipulate that, to be eligible for listing in the NRHP, a resource must be substantially intact or undisturbed, AND must be significant because it either:

- relates to or illustrates locally, regionally, or nationally important historic trends or events;
- is associated with an individual who was important in local, regional, or national history;
- represents an unique or outstanding example of a specific resource type; or
- contains data that can contribute to our understanding of history or prehistory.[7]

Fort Belvoir Status. The previously completed architectural and archeological investigations that identify, document, and evaluate potentially significant cultural resources at Fort Belvoir have been discussed in Chapter II under the section *Previous Cultural Resources Investigations*, and are summarized at the end of this chapter. However, for Fort Belvoir to continue to meet its requirements under NHPA, additional identification and evaluation efforts are recommended to complete the post inventory and to evaluate specific cultural resources. Specific recommendations for future identification and evaluation efforts at Fort Belvoir are presented in Chapter V, *Action Plan.*

Personnel Training

Periodic training for personnel involved in planning, engineering, and cultural resource management supports the development of a more effective and efficient cultural resources management program, because it refines the skills necessary to manage cultural resources effectively and broadens staff awareness of basic CRM policies, procedures, and resources. In general, CRM training should:

- familiarize key base personnel with historic preservation legislation, procedures, and basic requirements for compliance activity;

- familiarize key staff with the installation's current inventory of cultural resources;

- acquaint personnel with changes in Federal regulations; and

- apprise staff of current building preservation techniques and technologies.

Fort Belvoir Status. Several of Fort Belvoir's DIS staff, including the present Cultural Resource Manager, have received formal training in preservation law and Section 106 compliance. DIS also has sponsored voluntary in-house training sessions on cultural resource issues. Such programs should be expanded, and participation by a wider staff should be encouraged. Specific recommendations for training base personnel, together with a partial list of available training programs, are included in Chapter V, *Action Plan.*

Management Strategies for Archeological Resources

Phases of Compliance. Adherence to the Section 106 process is required when any archeological investigations are required. The cultural resource review process for archeological resources outlined in Section 106 generally is divided into three phases of compliance: (1) identification (Phase I); (2) evaluation (Phase II); and (3) treatment (Phase III). Additional specific guidelines about procedures applied to archeological resources can be found in *Archeology and Historic Preservation: The Secretary of the Interior's Standards and Guidelines, National Register Bulletin 24*, and in the ACHP publication *Consulting About Archeology Under Section 106*.[8]

Identification (Phase I Survey). Identification entails locating and compiling information about the archeological resources on the installation and generating an inventory of those resources. Identification studies may be undertaken in compliance with both Section 110 and/or Section 106 of NHPA.

Phase I identification studies typically include literature review, archival research, and limited systematic field testing. Phase I archeological testing most often involves the manual excavation of sub-surface shovel tests within a defined area, the recordation of soil data and sub-surface features, and the recovery and analysis of artifacts. Under specific conditions, alternate means of site identification may be utilized in lieu of, or in combination with, manual excavation. These methods may include:

- systematic mechanized testing in locations where cultural resources may be deeply buried (e.g., beneath fill, deep alluvial soils, or the debris from demolished buildings); and/or

- pedestrian reconnaissance in locations where surface visibility permits the identification of exposed cultural resources.

Evaluation (Phase II Study). Phase II evaluation studies are conducted to determine whether an identified archeological resource qualifies for listing in the National Register of Historic Places using the National Register Criteria for Evaluation (36 CFR 60.4 [a-d]). Evaluation studies may be undertaken in compliance with NHPA, under Section 110 and/or Section 106. A National Register eligible archeological site generally must be older than 50 years; must be significant as defined by the

Criteria for Evaluation; and generally should possess integrity; that is, its features and deposits must be sufficiently undisturbed to permit it to convey its significance.[9]

Evaluation (Phase II) archeological studies seek to develop the historic context of specific site, and to determine the horizontal and vertical boundaries, the age and function, the integrity, and the research potential of a site. Techniques used in Phase II studies include:

- site-specific archival research;
- excavation of a number of larger units that are placed to determine the nature of all deposits associated with the site;
- advanced artifact analysis; and
- where appropriate, the recovery and specialized analysis of data such as pollen, soil chemicals, and faunal and botanical materials.

Treatment (Phase III). Ideally, the Advisory Council recommends that a National Register listed or National Register eligible archeological site be left intact and preserved from damage. Preservation strategies are developed on a case-by-case basis in consultation with the SHPO, taking into account a variety of factors. Some of these factors include: the nature of the site; the potential for adverse impacts to its deposits; the research value of each archeological property or group of properties; the property's significance under other National Register criteria, societal and mission needs, and the preservation potential of the site.[10] Some commonly utilized methods of site protection include:

- designing construction projects to leave a reasonably protected open space around sensitive archeological properties;
- covering an archeological site with fill, provided caution is exercised to limit compaction, soil disturbances, chemical changes, and changes in soil structure, and provided reasonable access can be assured for future research;
- protecting archeologically sensitive sites or areas from damage by nearby projects or training activities through fencing, armoring, construction of berms, or re-routing of construction or training activities;
- designing structures over an archeological site in such a way as to minimize sub-surface disturbance; or,
- establishing protective covenants, easements, or other arrangements with residents, operators, or users of affected lands or facilities to protect properties within their control.

Archeological data recovery is used to mitigate adverse effects to archeological resources that cannot be managed using any of the methods described above. Data recovery studies involve the systematic removal of a sample of the data that provide an archeological site with research value, and may involve additional Phase I surveys and/or extensive excavation of a site. Data recovery and site preservation sometimes are combined, so that portions of the site are preserved intact. The extent and

nature of data recovery required will be agreed upon by the Department of the Army and the SHPO during the Section 106 review process.

Fort Belvoir Status. To date, a total of 302 archeological sites have been documented at Fort Belvoir and 178 sites have been recommended for further investigation. Except for one area adjacent to Davison Air Field, Fort Belvoir has completed Phase I surveys for the entire installation.[11,12] However, there also is a potential for discovery of additional unrecorded sites unrecorded archeological sites within previously surveyed areas, particularly those examined in the 1980s, or areas described previously as "disturbed."

An effective, proactive management program for Fort Belvoir's known and potential archeological resources requires that installation planners predict future needs for archeological compliance. Required Section 106 compliance responsibilities should be discharged first, as the potential effects of planned construction projects and other undertakings on identified or potentially National Register eligible sites are assessed during project planning.

Non-compliance related, Section 110, cultural resource management activities may be undertaken using such funding sources as grants, discretionary installation funds, or unexpended FY cultural resource management funds. Such activities should include updating, at least every five years, Fort Belvoir's inventory of identified archeological sites, as well as dealing with related issues, such as collections management. Fort Belvoir should give priority to:

- evaluating "at-risk" National Register eligible archeological sites, such as those located in likely Areas of Potential Effect for future undertakings, or sites subject to damage from natural processes, vandalism, or deterioration;

- reviewing previous archeological survey data to highlight areas of concern for unrecorded archeological sites, and conducting supplemental surveys, where necessary;

- investigation of identified archeological resources for which Fort Belvoir lacks sufficient information (unevaluated properties);

- assessing and resolving curation needs for Fort Belvoir's archeological collections, including recovering collections held by private contractors and/or institutions and unifying them in a single repository; and

- assessing sites on properties proposed for acquisition or for disposal.

Specific recommendations for additional identification and evaluation efforts for Fort Belvoir's archeological resources are presented in Chapter V, *Action Plan.*

Treatment Strategies for Architectural Resources

Secretary of Interior's Treatment Options. The Secretary of Interior's *Standards for the Treatment of Historic Properties*[13] recommend four treatment options for historic buildings:

- **Restoration** returns a property to a particular period(s) of time. This treatment option may include the removal of later additions or changes, the repair of deteriorated elements, or the replacement of missing features.

- **Reconstruction** recreates missing portions of a property for interpretive purposes.

- **Preservation** is the maintenance and repair of a property's existing historic materials and design as it evolved over time.

- **Rehabilitation** is the process of returning a property to a useful state. This encompasses adapting a property to meet continuing or changing uses while retaining the property's character-defining features.

Although these treatment options do not provide specific technical guidance on which architectural features to retain, they do provide a framework for making decisions.

NHPA recognizes that preservation of historic properties, while the preferred option, may not be feasible. Hence, responsible management of built resources requires the development of treatment strategies based upon a variety of factors. These include:

- the significance of the historic property and its relative importance in history;

- the physical condition of the building;

- the proposed use of the building;

- mandatory code requirements; and

- the public interest.

A visual inspection of the building and a baseline assessment of the building's current condition and architectural integrity should be conducted to determine the most appropriate preservation strategy. The level of intervention necessary to preserve the building is based on the results of these investigations.

Mitigation Strategies. When none of the four options described above is feasible, mitigation measures may be negotiated as part of the Section 106 consultation process for each case. Eight standard techniques may be employed to mitigate adverse project effects on built resources.

Recordation. Recordation of historic buildings traditionally has been a frequent mitigation option for projects that necessitate adverse effects to such historic properties. The level and type of the recordation generally is negotiated on a case-by-case basis under a Memorandum of Agreement, as appropriate under the Section 106 process.

Documentation to the standards of the Historic American Buildings Survey (HABS) or Historic American Engineering Record (HAER) is a mitigation option employed when a resource of particular significance will be adversely impacted by a project (e.g., demolition or substantial alteration). The HABS/HAER program, administered by the National Park Service (NPS) Cultural Resources Stewardships and Partnership Program, involves producing a permanent photographic,

written, and graphic record of an historic property while allowing the project to move forward. HABS/HAER documents are housed and maintained by the Library of Congress, Prints and Photographs Division.

Because the level of HABS/HAER documentation varies with the significance and nature of the resource, the first step in the HABS/HAER documentation process is consultation with the NPS Regional Coordinator for evaluation of the resource and for stipulation of the extent of documentation. The most extensive level of documentation requires measured drawings, large format black and white photographs, and written historical and descriptive data. However, most projects require only large format photographs and written historical and descriptive data. Recent National Park Service program changes have qualified the types of buildings and structures eligible for inclusion in the HABS/HAER collection. Recordation of less significant buildings or building types previously documented in the collection, may be documented in the state inventory, as determined through coordination with VDHR.

Design Review. Projects involving new construction that affect historic properties frequently require compliance with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (36 CFR 67).[14] These standards require that the design of the new construction must be compatible with the affected historic property in size, scale, color, material, and architectural character. Compliance with the Secretary of the Interior's standards for new construction involves:

- analysis of the design qualities, or "character-defining" features, of surrounding historic properties;
- development of a range of acceptable design alternatives for incorporation into the new building design; and
- submission of a narrative justification for project compliance together with the building plans. These documents then are directed through the review process.

Rehabilitation. Under the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (36 CFR 67), rehabilitation is the preferred option for mitigating project effects on built resources. Rehabilitation is the process of returning a building to useful service while retaining significant design features. Development of appropriate rehabilitation plans entails:

- analysis of the historic structure to identify its significant historic, architectural, and cultural values by completing an intensive architectural survey;
- evaluation of the architectural integrity and structural condition of the building as a whole, as well as its component parts;
- development of a range of reuse alternatives and specific preservation procedures based upon the survey data and building analysis;
- preparation of a narrative that identifies the appropriate standard and its application. This narrative is incorporated as an attachment to the project review plans.

Covenants. Preservation covenants frequently are required when significant properties are transferred from Federal to private ownership. Covenants insure the on-going preservation and maintenance of significant historic, architectural, or cultural values in compliance with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (36 CFR 67). Development of preservation covenants involves:

- conducting an intensive inspection of the historic property to identify its significant features;
- developing covenant stipulations and incorporating them in property transfer documents; and, in some instances,
- developing marketing strategies to identify potential purchasers, advertise the property, and receive and evaluate offers.

Moving Historic Properties. Moving an historic property may be the best preservation approach when faced with an otherwise unavoidable adverse impact and the destruction of the property. The recommendations set forth in the Department of the Interior's publication, *Moving Historic Buildings*,[15] should be followed in executing the move of an historic property.

Addition of Landscape Features. Landscaping may be used to mitigate both the effects of new construction and/or site relocation. Appropriate landscaping provides a visual and noise screen for historic properties., while appropriate period landscape design can enhance the architectural and historic values of an historic building or site.

Architectural Salvage. Salvage of significant building fabric is a mitigation strategy employed in projects where the demolition of historic properties cannot be avoided. In such cases, project effects are mitigated through the reuse or curation of significant features. The execution of salvage stipulations requires the identification, removal, and storage of salvageable materials, using the following procedural sequence.

- Criteria are developed for selecting salvageable elements based on the historic, architectural, and cultural values of the propert(ies).
- Using these criteria, a site-by-site inventory is undertaken to identify such materials.
- Salvageable materials are removed from each structure in advance of general demolition, if possible.
- Salvaged materials are inventoried and stored in an appropriate facility, such as an on-site salvage yard.
- Notice of material availability, information on transportation and legal title, salvage inventories, and re-use requirements are made available to historic preservation organizations, architectural review committees, museums, and the public.

Public Interpretation. As part of large-scale mitigation efforts, public interpretation of the resource may be recommended. Public interpretation programs are useful in imparting project

information to special interest groups and the public at large. These efforts can be used effectively by Federal agencies to promote public support for their cultural resource programs, and to mitigate negative public sentiment due to misinformation or to the perceived destruction of historical sites or properties.

Status of Fort Belvoir's Architectural Resources. To date, several National Register-eligible built resources have been identified at or immediately adjacent to Fort Belvoir: (1) the Fort Belvoir Historic District; (2) the U.S. Army Package (Nuclear) Power Reactor Multiple Property; (3) Woodlawn Friends Meeting House; (4) Camp A.A. Humphreys Pump Station and Filter Building (Buildings 1400 and 1424); and (5) the Thermo-Con House (Building 172). Table 6 summarizes the current inventory of architectural resources that have been determined eligible for the National Register. The Fort Belvoir Historic District and the Camp A.A. Humphreys Pump Station and Filter Building were formally reviewed by the Virginia Department of Historic Resources (VDHR) in December 1996. The current boundaries of the Fort Belvoir Historic District[16] encompass the administrative and residential core of the facility and encompass 196 contributing structures and 11 non-contributing buildings.

A comprehensive survey and evaluation of the installation's Cold War resources (1946 - 1989) has not been completed to date. Recommendations for additional identification and evaluation efforts for Fort Belvoir's architectural resources are presented in Chapter V, *Action Plan.*

Due to funding limitations and operational priorities defined by its mission, restoration and reconstruction are unlikely approaches for Fort Belvoir's historic buildings and structures. Preservation and rehabilitation should be considered as feasible treatment options for Fort Belvoir's historic structures. Building rehabilitation provides a pragmatic alternative to preservation when a structure requires substantial upgrades or modifications to accommodate a new use or continued active service. Many original barracks buildings in the historic district have been rehabilitated for use as classrooms.

Preservation and Maintenance Plan for Fort Belvoir's Historic Buildings

Addressing of the care and treatment of Fort Belvoir's historic buildings and structures requires development of a preservation and maintenance plan. The plan should be aimed at retaining the important character-defining architectural features and overall spatial qualities (i.e., parade ground, road layout, tree plantings) of the installation's historic areas within the context of the installation's mission.

In general, preservation and maintenance of historic properties involves a three-stage process: (1) identifying conditions contributing to materials deterioration; (2) stabilizing historic materials; and (3) maintaining stabilized conditions. As a general principle, preservation strategies that require the lowest level of building intervention are preferred. *Low level* intervention measures include minor systems upgrades and implementation of a preventive maintenance program. Examples include regrading around a building's perimeter or replacing leaking gutters and downspouts. *Moderate level* intervention should be implemented only if low-level approaches prove ineffective. *High level* interventions are the most intrusive and potentially the most disruptive to the building system.

The *Secretary of the Interior's Standards for the Treatment of Historic Properties*[17] provide the principal guidelines for the treatment of historic properties and outline practical approaches for preserving the integrity of historic materials and character-defining architectural features. As

discussed in the previous section, *Treatment Strategies for Architectural Resources*, preservation and rehabilitation were recommended as appropriate treatment options for Fort Belvoir's historic properties.

General guidance for preserving and maintaining Fort Belvoir's historic buildings should follow the five "Guidelines for Preserving Historic Buildings" presented in the Secretary of the Interior's *Standards*:

- identify, retain, and preserve historic materials and features;
- Stabilize deteriorated historic materials and features as a preliminary measure;
- Protect and maintain historic materials and features;
- Repair (stabilize, consolidate, and conserve) historic materials and features; and
- Limited in-kind replacement of extensively deteriorated portions of historic features.[18]

In rehabilitation, historic building materials and character-defining features are protected and maintained as they are in the treatment preservation; however, more repair and replacement may be required. As a result, the standards and guidelines for rehabilitation allow for the replacement of extensively deteriorated, damaged, or missing features using either traditional or substitute materials. Of the four treatment options, only rehabilitation provides the opportunity to adapt a building to a contemporary use through alterations and additions.[21]

Preventive Maintenance Program

Maintenance is vital to prolonging the life of any building. While building repairs are an inevitable part of a maintenance program, the key to a successful maintenance program is to reduce and prevent major repairs. Maintenance includes adopting basic cyclical preventive procedures that are carried out to preserve the historic building material and prevent the need for repairs to address more serious deterioration. Repair treatments imply a greater degree of intervention into the historic fabric of the structure, and are undertaken when regular maintenance is not adequate to halt deterioration.

Building maintenance should not be conducted strictly on an "as-needed" basis; that is the most expensive approach, because if maintenance is postponed, unnecessary deterioration will occur. Instead, a proactive maintenance program should emphasize systematic prevention rather than repair. A regular building inspection program can prevent neglect by identifying conditions before they threaten a building's historic fabric; inspections slow the inevitable process of deterioration by identifying potential problems before they escalate into severe failures.

Because inspections help to anticipate problems before they occur, capital projects can be funded in ample time, before damage to historic building materials occurs, thus streamlining the building maintenance and repair program by avoiding costly budget delays. Routine inspections also ensure that basic maintenance tasks, such as cleaning gutters and downspouts and clearing mulch build-up from a building's foundation, are not overlooked. The annual building inspection program,

although designed specifically for historic resources, also may be applied to all buildings, new and historic.

Given basic training in identifying and correcting defects in historic resources (see Table 9), Fort Belvoir's maintenance contractor can conduct the annual inspections; however, a full professional inspection should be undertaken every five years. Use of a formal inspection form to guide annual inspections (Figure 12) is recommended so that important building elements are not overlooked. Valuable aids utilized during an inspection include a flashlight, a camera to record problems, and binoculars to study inaccessible parts of a building exterior.

Systematic inspections examine a building system by system, beginning with the exterior and proceeding to the interior. As shown in Figure 12 and discussed below, four major components of the building are emphasized. These include:

- the roof and drainage system. This section is aimed at identifying defects in the way rainwater is carried away from the structure. Ideally, the roof and drainage system should be inspected during or shortly after a rainstorm so that clogged gutters, blocked downspouts, and wet walls can be detected easily. Cladding, flashing, skylights, ventilators, eaves, gutters, downspouts, and drains should be examined. As part of all visual inspections, rooftops, drains, gutters, and downspouts should be cleared of any debris. Drains at the bases of buildings also should be inspected to ensure that rainwater is channeled away from the foundation for a minimum of 10-13 feet to prevent moisture penetration.

- walls and foundations. The form focuses attention on problems associated with the walls and foundations, such as cracks, spalling, stains, and, in the case of wood siding, rot. Exterior trim should be intact; that is, paint layers should not have failed, and exterior trim elements should not be deteriorated, broken, or missing.

- windows and doors. These should be inspected for rot; corrosion; indications of structural defects such as sagging arches or lintels; glazing and paint failure; and deteriorating caulking around the windows. Condensation on windows should be noted, as excessive condensation can cause wood windows to rot and metal windows to corrode. Window and door sills must be angled properly to shed water.

- interior conditions. Thorough inspection of a building's interior ensures that no signs of deterioration are overlooked. The form is designed to assist in detecting stains, cracks, evidence of insect infestation, and signs of moisture damage, and to determine that utilities are in working order.

Fort Belvoir Status. To date, two reports have been completed that offer guidance for preserving and maintaining historic properties at Fort Belvoir: *Historic Components Guidebook Series*[20] and *Fort Belvoir Historic Building Survey*.[21]

The *Historic Components Guidebooks* were prompted by the adoption of Stewardship Standards for the preservation and rehabilitation of historic family quarters at installations under the jurisdiction of the MDW, including Fort Belvoir. These standards developed a plan for family

Table 9: Conservation Training Courses for Maintenance and Operations Personnel

Title/Location Cost/Duration	Contact	Description	Intended Audience
Historic Structures: Craft Skills Training Location: San Antonio, Texas 1998 Cost: $1,505 Duration: 1 week	Frank Norcross US Army Corps of Engineers Attn: CEMP-EA 20 Massachusetts Ave., NW Washington, D. C. 20314-1000 Phone: (202) 761-0881 Fax: (202) 761-8815	Provides crafts skills training for technicians and construction inspectors who maintain, preserve and rehabilitate historic buildings. Includes classroom and skills training. Classroom training (12 hrs) covers the Secretary of Interior's *Standards*; levels of treatment; character-defining features; preservation of historic fabric (repair vs. replacement); deterioration of masonry, wood, roofing and flashing. Skills training includes a 3-day field exercise working with experienced craftsman on an on-going preservation project.	Occupational Series 1910, 1960, 3603, 3605, 3706, 4102, 4604, 4605, 4607, 4618, 4749, and 5318. Grade: GS-07, WG-11, E-6, 0-1 or above with one year minimum experience in the organization Open to both installation and COE personnel.
Historic Structures: Maintenance and Repair Location: Seattle, Washington 1998 Cost: $1,315 Duration: 1 week	Frank Norcross US Army Corps of Engineers Attn: CEMP-EA 20 Massachusetts Ave., NW Washington, D. C. 20314-1000 Phone: (202) 761-0881 Fax: (202) 761-8815	Provides an awareness of the unique characteristics, legal requirements, procedures, technical knowledge, and skills needed to maintain and repair Federally-owned historic properties. Course reviews laws, regulations, criteria; identification and documentation of historic fabric; reasons for deterioration; design issues; exterior finishes; life safety; engineering support; life cycle value.	Occupational Series: 0020, 0023, 0025, 0028, 0170, 0193, 0301, 03341, 0342, 0343, 0408, 0800s, 1005, 1008, 1170, 1171, 1173, 1176k 1300, 1640, 1910, 1960, other series with cultural resource responsibilities. Grade: GS-07, WG-11, E-6, O-1 or above. 1 year minimum experience in the organization. Open to both installation and COE personnel
Seminars in Historic Preservation Location: By request 1998 Cost: $500 - $10,000 Duration: 1-3 days	Horace Foxall US Army Corps of Engineers Seattle District Technical Center of Expertise for Historic Buildings and Structures (TCX) P.O. Box 3755 Seattle, WA 98124-2255 Phone: (206) 764-4482	Offers custom seminars to address specific needs in historic preservation training, including theory and practice; buildings diagnostics; maintenance and repair; and, Federal laws and regulations	Optional

Title/Location Cost/Duration	Contact	Description	Intended Audience
Section 106: An Introduction **Section 106: Advanced Seminar** Location: Variable 1998 Cost: Variable Duration: 1-5 days	National Preservation Institute (NPI) P.O. Box 1702 Alexandria, VA 22313 E-mail: info@npi.org Web Site: www.npi.org	Offers a series of professional training seminars for management, development and preservation of historic, cultural, and environmental resources related to historic preservation and cultural resource management. NPI also will customize seminars or workshops to meet the needs of a particular group, organization, or agency.	Professionals involved in the management and stewardship of cultural and histsoric resources, charged with compliance and contracting, an/or involved in the cultural resource and environmental management process.
Courses in Historic Preservation Location: Washington, D. C. Towson, Md. 1998 Cost: Variable Duration: Variable	Goucher College Center For Continuing Studies Historic Preservation Certificate Program 1021 Dulaney Valley Road Baltimore, MD 21204-2794 Phone: (410) 337-6200 1-800-697-4646 Fax: (410) 337-6085	Offers a series of 10 courses leading to a certificate in historic preservation. Interested parties may take a single course or pursue a complete certificate. Course offerings vary, depending on semester. Catalogue of most recent listings available on request.	Optional
Workshops in Historic Preservation Location: Variable 1998 Cost: Variable Duration: Variable	John Leeke Preservation Consultant 26 Higgins Street Portland, ME 04103 Phone: (207) 773-2306 Web Site: www.HistoricHomeWorks.com	Offers custom workshops in historic preservation methods and techniques.	Optional
Workshops in Preservation Technology (Various titles) Location: Variable 1998 Cost: $435 (non-member) Duration: 2 days	Association for Preservation Technology (APT) P. O. Box 8178 Fredericksburg, VA 22404 Phone: (703) 373-1621 Fax: (703) 373-0650	Courses offered in conjunction with organization's conference. Recent examples include "Early Building Technology of the Chesapeake" and "Coating for Architectural Surfaces."	Professional contractors, architects, masons, craftspeople
Preservation Philosophy for People Who Maintain Old Buildings Location: Windsor, VT 1998 Cost: $250 Duration: 4 days	Judy Hayward Preservation Institute for the Building Crafts Historic Windsor P. O. Box 1777 Windsor, VT 05089 Phone: (802) 674-6752	Course covers building diagnostics; importance of routine maintenance; balancing needs of historic buildings, landscapes and collections; conservation guidelines; communications skills; tools; ways in which professional expertise can aid in the decision-making process. Prepares participants to make typical judgement calls on the job—repair, replace, preserve, restore: which first? Other training courses include Historic Wooden Flooring	Caretakers, maintenance personnel, and property managers

(NAME OF INSTALLATION)

BUILDING INSPECTION FORM

Building Name

Building Number

Inspector:

Date:

Element	Condition		Comments	Date Corrected
	YES	NO		
Exterior Conditions				
Drainage System				
• Is the roof watertight?				
• Are shingles and tiles in place?				
• Has built-up roofing been checked for blistering and cracking?				
• Is flashing intact?				
• Do gutters retain proper pitch/are they clean?				
• Are downspout joints intact?				
• Are drains unobstructed?				
• Is site graded to channel water away from foundation?				
• Is vegetation cleared from structure to avoid trapping moisture?				
Exterior Walls				
• Are masonry walls in good condition to seal out moisture?				
• Have walls been checked for cracking, spalling, and/or mortar loss?				
• Is wood siding in good condition?				
• Are walls free of stains or discoloration?				
• Are paint and stucco finishes in good condition?				
• Has foundation been checked for leaks?				

Figure 12. Sample inspection form for building maintenance

quarters that addressed such issues as architectural integrity, patterns of use, and fiscal responsibility. The Family Quarters Historic Preservation Task Force responsible for creating these standards wrote:

> It is the policy of the MDW to implement its vision of the importance of its historic resources by retaining, renovating, and maintaining its Historic Family Quarters in a manner consistent with its stewardship responsibilities, military mission, and the public interest.[22]

Guidebooks were prepared for each quarters or set of similar quarters at Fort Belvoir (Quarters 2 - 60, Quarters 67, Quarters 68, Quarters 101 - 165, and Quarters 166 -171). These documents provided an inventory of existing historically significant components; specified appropriate new components; and presented procedures to be followed during maintenance or preservation work. The Stewardship Standards were designed for use in conjunction with the Secretary of the Interior's *Standards* and the *Installation Design Guide*. The guidebooks were intended to guide the renovation of selected quarters, following approved standards, to serve as models for future work on the historic quarters .[23]

The architectural study included a survey of 33 historic, non-residential buildings (Buildings 20, 190, 191, 193, 201-213, 216, 219, 256-258, 268-270, 372, and T1139-T1145) that documented existing conditions and provided a list of specific preservation and maintenance recommendations. The conditions assessment survey examined the buildings' interiors and exteriors; identified the principal building materials, character-defining features, and building alterations; assessed existing conditions; and generated recommendations for rehabilitation. Repairs were prioritized according to three levels (Priority 1, 2, or 3) depending on their urgency.[24]

Negotiation of a Programmatic Agreement (PA)

A Programmatic Agreement (PA) is a negotiated document that can satisfy the Section 106 review requirements for mission activities that will have no adverse effect on historic properties. The agreement assists a facility to comply with Section 106 of NHPA. Generally, a PA, which is negotiated among the agency (Fort Belvoir), the SHPO, and the ACHP, develops stipulations that will be employed to ensure that adverse effects do not occur. The general public will be notified of the consultation process and allowed time to comment. After reaching final agreement, the PA is signed by the Council, the SHPO, the Agency official, and all other consulting parties.[25] Execution of the stipulations evidences the agency's fulfillment of its Section 106 responsibilities.

A PA can be developed for large and complex projects or for a class of recurrent undertakings that would otherwise require Section 106 review on a case-by-case basis. Situations appropriate for the development of a PA include:

- undertakings whose effects on historic properties are similar and repetitive or are multi-state or national in scope;
- undertakings whose effects on historic properties cannot be fully determined prior to approval;
- undertakings for which non-Federal parties have been delegated major decision-making responsibilities;

- development of regional or land-management plans; or

- routine management activities at Federal installations.

Because undertakings at Fort Belvoir are often similar and repetitive, negotiation of a PA can streamline the consultation process with the SHPO and the Advisory Council on Historic Preservation (ACHP). A Draft Programmatic Agreement has been appended to this draft ICRMP.

Periodic Review of the ICRMP

The Fort Belvoir ICRMP is designed to be a dynamic document that responds to changing mission priorities, planning, and development goals at the installation, and that provides guidance on a wide range of potential CRM situations. The plan requires periodic revisions in order to remain effective. As a matter of practice, the ICRMP requires periodic re-evaluations of known cultural resources, evaluations of potential resources, review of the effectiveness of planning strategies, and revisions to the points of contact for consultation.